

forming a resist film on the first mask film, the resist film being used as an etching mask to form an opening on the first mask film, followed by the formation of trenches on the insulating film exposed from the opening

forming, after the resist film is removed, a second mask film on the semiconductor substrate or SOI substrate, said second mask film covering side walls and a bottom of the trenches;

removing the second mask film from the bottom of the trenches without removing the second mask film on the side walls of the trenches, forming a side wall made of the second mask film on the side walls of the trenches;

and using the first mask film and the second mask film as the etching mask in etching said trenches deeper than a thickness of said insulating film so as to penetrate into a portion of said substrate to form connecting holes.

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2. (Four Times Amended) A manufacturing method of a semiconductor IC device comprising the following steps :

forming an insulating film on a semiconductor substrate or SOI substrate;

forming a first mask film on the insulating film;

forming a resist film on the first mask film, the resist film being used as an etching mask to form an opening on the first mask film, followed by the formation of trenches on the insulating film exposed from the opening

forming, after the resist film is removed, a second mask film on the semiconductor substrate or SOI substrate, said second mask film covering side walls and a bottom of the trenches;

removing the second mask film from the bottom of the trenches without removing the second mask film on the side walls of the trenches, forming a side wall made of the second mask film on the side walls of the trenches;

using the first mask film and the second mask film as the etching mask in etching said trenches deeper than a thickness of said insulating film so as to penetrate into a portion of said substrate to form an opening on the insulating film, followed by the formation of separating trenches on the semiconductor substrate or SOI substrate exposed from the opening;

burying an insulating film in the separating trenches to form a separating portion.

3. (Four Times Amended) A manufacturing method of a semiconductor IC device comprising the following steps :

forming an insulating film on a semiconductor substrate or SOI substrate;

forming a first mask film on the insulating film;

forming a resist film on the first mask film, the resist film being used as an etching mask to form an opening on the first mask film, followed by the formation of trenches on the insulating film exposed from the opening

Direct forming, after the resist film is removed, a second mask film on the semiconductor substrate or SOI substrate, said second mask film covering side walls and a bottom of the trenches;

removing the second mask film from the bottom of the trenches without removing the second mask film on the side walls of the trenches, forming a side wall made of the second mask film on the side walls of the trenches;

and using the first mask film and the second mask film as the etching mask in etching said trenches deeper than a thickness of said insulating film so as to penetrate into a portion of said substrate to form wiring-forming trenches on the insulating film, followed by burying an electroconductive material in the wiring-forming trenches to form a wiring layer made of the electroconductive material.
